

DOCKET NO: 260062US28



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
EVELYN BOETTCHER, ET AL. : EXAMINER: DUVERNE, J. F.
SERIAL NO: 09/957,022 :
FILED: SEPTEMBER 21, 2001 : GROUP ART UNIT: 2839
FOR: TUNABLE DISPERSION :
COMPENSATING BANDWIDTH DEVICE
FOR FIBER OPTICS SYSTEM

SUPPLEMENTAL APPEAL BRIEF UNDER 37 C.F.R. 1.193(b)(2)(ii)

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of a non-final rejection, mailed December 30, 2004, of Claims 1, 2, and 11. A Notice of Appeal was timely filed on March 30, 2005.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is C-COR INCORPORATED.

II. RELATED APPEALS AND INTERFERENCES

A prior Notice of Appeal was filed in response to a final rejection, mailed November 19, 2004, of Claims 1-4, 10, and 11. After receiving Appellants' appeal brief in that matter, Examiner Duverne reopened prosecution via the non-final rejection addressed herein. Appellants, Appellants' legal representative, and the assignees are aware of no other appeals which may bear on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 1-19 are pending in this application. Claims 1, 2, and 11 are non-finally rejected and form the basis for this appeal. Claims 5-10 and 14-19 are allowed. Claims 3, 4, 12, and 13 are objected to as being dependent on a rejected base claim. The attached appendix includes a clean copy of appealed Claims 1, 2, and 11.

IV. STATUS OF THE AMENDMENTS

No amendments, after the outstanding rejection, have been filed.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent Claim 1 is directed to a tunable dispersion compensating device for optical communications systems. A non-limiting example of the claimed subject matter is illustrated by Figure 1B, which shows a surface of a compliant material support block 10 receiving a load applied in a direction substantially orthogonal to a longitudinal axis of the compliant material support block 10. The non-limiting embodiment of Figure 2 illustrates the compliant material support block 10 as including a Bragg-grating fiber 24.¹

Independent Claim 11 relates to a method of making a tunable dispersion compensating device, such as the device of Claim 1. A non-limiting example of the claimed method describes the disposing of a Bragg-grating fiber into an elongate mold and subsequent pouring of support material therein.² The support material is compliant when set. Attaching of a load supply assembly to the support material is also described by the non-limiting example.³

¹ Appellants' Specification, page 4, line 25 – page 5, line 1.

² Appellants' Specification, page 5, line 22 – page 6, line 13.

³ Appellants' Specification, page 4, lines 3-12.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The outstanding rejection of Claims 1, 2, and 11 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 4,599,908 to Sheridan et al. (hereinafter "Sheridan") is appealed.

VII. ARGUMENTS

A. Claim 1

The rejection of Claims 1, 2, and 11 under 35 U.S.C. §103(a) as unpatentable over Sheridan appears to be based upon a clearly erroneous interpretation of Sheridan.

Initially, Applicants note that the rejection does not explain the manner in which Sheridan is modified to teach the claimed invention. The MPEP states, "For rejections under 35 U.S.C. 103, the way in which a reference is modified or plural references are combined should be set out."⁴ As the rejection fails to "set out" the modification of Sheridan, the rejection is improper.

The rejection also fails to satisfy any of the three basic criteria for establishing a *prima facie* case of obviousness.⁵ The first criterion requires some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The second criterion requires a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not in an applicant's disclosure.⁶ The rejection is devoid of any explanation, nonetheless a citation, of the suggestion or motivation to modify Sheridan. Further, as

⁴ MPEP 707.

⁵ MPEP 2143.

⁶ MPEP 2143; citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants cannot discern the manner in which the rejection proposes to modify Sheridan, there is no indication that one skilled in the art would reasonably expect to modify Sheridan's teachings.

The third criterion requires that the prior art reference (or references when combined) must teach or suggest all the claim limitations.⁷ Claim 1 recites "a Bragg grating fiber disposed in said compliant support block". Neither the rejection nor Sheridan mention the term "Bragg-grating". Moreover, Sheridan does not teach a fiber disposed in a compliant support block. In that regard, Applicants note that Sheridan's optical fiber 36 is not disposed within the flexible elastomer body 32 or the flexible reflective layer 42, which are both cited as teaching the claimed compliant support block. Rather, Sheridan's optical fiber 36 is disposed within the base 34, which appears to be cited as teaching the claimed support frame of Claim 2.

Applicants further note that one skilled in the art would not extend Sheridan's optical fiber 36 into the passage holes 46, because the passage holes 46 are intended to receive the volumetrically displaced portions 48 of the flexible elastomer body 32. A difference in the intensity of light transmitted from and reflected back to the optical fiber 36 (see the left passage hole 46 of Figure 2) is dependent upon the size of the volumetrically displaced portions 48, which is in turn dependent upon the amount of pressure 50 applied to the outer opaque protective coating 44. Sheridan's device determines the amount of pressure 50 via the difference in the intensity of the light transmitted from and reflected back to the optical fiber 36.⁸

Extending the optical fiber 36 into the passage hole 46 would impede the bulging of the volumetrically displaced portions 48 into the passage hole 46, thereby also impeding the blockage of light by the volumetrically displaced portions 48. Such a modification would

⁷ MPEP 2143.

⁸ Sheridan, col. 3, lines 22-50.

also cause the optical fiber 36 to carry the light past the volumetrically displaced portions 48, thereby further decreasing their ability to block the light. A decrease in the difference between the amount of light transmitted from and reflected back to the optical fiber (i.e., the amount of blocked light) would result in a corresponding decrease in the accuracy of the pressure 50 measurements. Therefore, extending Sheridan's optical fiber 36 into the passage hole 46 would render Sheridan's device unsatisfactory for its intended purpose and change a principle of operation thereof. Accordingly, there is no motivation to extend the optical fiber 36 into the passage hole 46 (assuming the rejection proposes to modify Sheridan in that manner).⁹

B. Claim 2

Claim 2 recites all the features of Claim 1 and adds a support frame in which the compliant support block is disposed. The claimed support frame includes openings that allow for expansion of the compliant support block. As noted above, the rejection appears to cite Sheridan's base 34 as teaching the claimed support frame. Applicants note, since an optical fiber 36 entirely fills each "opening" of the base 48, those openings do not allow for expansion of the flexible elastomer body 32. Accordingly, as all features of Claim 2 are neither taught nor suggested by Sheridan, no *prima facie* case of obviousness has been established.

C. Claim 11

Claim 11 is a method claim requiring the disposing of a "Bragg-grating fiber into an elongated mold." As noted above, neither the rejection nor Sheridan mentions a Bragg-grating fiber. Further, Claim 11 recites "attaching a load-supplying assembly to said support material." There is no teaching of this claimed step within Sheridan; and no rationale in the rejection as to where or how Sheridan teaches this step.

⁹ MPEP 2143.02.

Accordingly, as all features of Claim 11 are not taught or suggested by Sheridan, no *prima facie* case of obviousness has been established.

CONCLUSION

In view of the preceding arguments, the rejections applied to Claims 1, 2, and 11 should all be reversed as being clearly improper.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



James J. Kulbaski
Attorney of Record
Registration No. 34,648

Michael E. Monaco
Registration No. 52,041

Customer Number

22850

Tel.: (703) 413-3000
Fax: (703) 413-2220

JJK/MEM/STD/kke

I:\ATTY\STD\26's\260062US\260062.SUP.AB-FINAL.DOC



VIII. CLAIMS APPENDIX

1. (Original): A tunable dispersion compensating device for optical communications systems, comprising:

a compliant support block having a longitudinal axis and a load-receiving surface oriented substantially parallel to said longitudinal axis, said load receiving surface being suitable to receive an applied load in a direction substantially orthogonal to said longitudinal axis; and

a Bragg-grating fiber disposed in said compliant support block and extending substantially along and at an angle to said longitudinal axis of said compliant support block.

2. (Original): A tunable dispersion compensating device according to Claim 1, further comprising a support frame, said compliant support block being disposed in said support frame,

wherein said support frame is open on opposing longitudinal ends suitable to allow said compliant support block to expand along said longitudinal axis in response to said applied load in said direction substantially orthogonal to said longitudinal axis.

11. (Original): A method of making a tunable dispersion compensating device for optical communications systems, comprising:

disposing a Bragg-grating fiber into an elongated mold;

pouring support material into said elongated mold, said support material being compliant when it sets; and

attaching a load-supplying assembly to said support material.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None